FARM BUSINESS MANAGEMENT

INFORMATION UPDATE

Manitoba Agriculture
Farm Management

Date December, 1985

GUIDELINES FOR ESTIMATING

COW CALF PRODUCTION COSTS

BASED ON

70 COW HERD

This guide is designed to provide planning information and a format for calculating costs of production on a cow-calf enterprise. The production costs included in this enterprise budget are not intended as a cost study of the beef industry in Manitoba.

The budget estimates costs of production for 1986 based on a number of assumptions which are clearly defined in the supporting pages. Input costs are based on recommended practices and/or information obtained from producers. Good management is assumed in that a balanced ration is being fed, livestock are on a herd health program and handling facilities are included.

Breakeven price analysis at two cost levels - all costs (except labor) and cash costs - are calculated at different weaning percentages and weaning weights. However, these do not take into account the cash flow obligations for debt repayment and family living costs. In the case of a new producer cash flow obligations may be more important to him than for a well established producer with very little debt. Nevertheless, both producers must cover operating costs.

The guideline can be useful for comparison purposes. Comparison of costs at different levels of production can be made with other farms; the farm over time; or comparing the plan with the actual production at the end of the planning period.

The budget may be adjusted by putting your figures in the appropriate column. Each cow-calf producer is encouraged to determine his own costs of production based on his own inputs, pasture program, and management.

For those producers with the Manitoba Beef Commission, premiums would have to be added to the operating costs.

COW-CALF BUDGET (1985)
(Excluding Pasture Costs)

OPERATING COSTS	COST PER COW	YOUR COSTS
Grain	$ 8.21	$_____
Hay	180.00	_____
Salt & Minerals	10.04	_____
Straw	19.80	_____
Vet. & Medicine (per cow)	13.68	_____
Breeding Costs	25.03	_____
Machinery Maintenance & Repairs	28.11	_____
Hydro, Water & Telephone	5.50	_____
Trucking, Selling Charges	2.73	_____
Death Loss	12.00	_____
Manure Removal	14.29	_____
Miscellaneous	6.00	_____
Operating Interest (12% Interest)	19.52	_____
TOTAL OPERATING COSTS	$344.91	$_____
FIXED COSTS		
Depreciation - Buildings	$ 14.26	$_____
- Machinery	19.54	_____
Investment Costs - Buildings	9.77	_____
- Machinery & Equipment	13.00	_____
- Livestock	48.00	_____
Herd Replacement	30.00	_____
TOTAL FIXED COSTS	$134.57	$_____
SUB-TOTAL COSTS (Excluding Labor & Pasture)	$479.48	$_____
Labor Cost 9 Hours x $9.50/Hour	$ 85.50	$_____

COSTS PER COW UNDER DIFFERENT PASTURE PROGRAMS

Alternative Pasture Programs:*	Marginal Land	Crop Land	Crown Land	P.F.R.A.	Your Costs
Operating & Fixed Costs	$479.48	$479.48	$479.48	$479.48	$_____
Pasture Costs	64.00	105.00	25.31*	39.00**	$_____
TOTAL COSTS (Operating, Fixed & Pasture) (Excluding Labor)	$543.49	$584.48	$504.79	$518.48	$_____

* Includes fence depreciation and investment cost.

** Includes only cow pasture rental fee (not calf fee).

BREAKEVEN ANALYSIS
OPERATING COSTS PER CALF
(Excluding Pasture Cost for Cow)

Alternative Pasture Programs:	Marginal Land	Crop Land	Crown Land	P.F.R.A.	Your Costs
	- - - Cost Analysis 85% Calf Crop - - -				
Operating Cost	$405.78	$405.78	$405.78	$405.78	$_____
Trucking, Selling*	10.11	10.11	10.11	19.11**	_____
TOTAL OPERATING COSTS (425 lbs. Weaned Wt.)	$415.89	$415.89	$415.89	$424.89	$_____
Cost Per Pound (425 lbs. Weaned Wt.)	$ 0.98	$ 0.98	$ 0.98	$ 1.00	$_____
TOTAL OPERATING COSTS (500 lbs. Weaned Wt.)	$417.64	$417.64	$417.64	$426.64	$_____
Cost Per Pound (500 lb. Weaned Wt.)	$ 0.84	$ 0.84	$0.84	$ 0.85	$_____
	- - - Cost Analysis 95% Calf Crop - - -				
Operating Cost	$363.06	$363.06	$363.06	$363.06	$_____
Trucking, Selling *	10.11	10.11	10.11	19.11**	$_____
TOTAL OPERATING COSTS (425 lbs. Weaned Wt.)	$373.17	$373.17	$373.17	$382.17	$_____
Cost Per Pound (425 lb. Weaned Wt.)	$ 0.88	$ 0.88	$ 0.88	$ 0.90	$_____
TOTAL OPERATING COSTS (500 lb. Weaned Wt.)	$374.94	$374.94	$374.94	$383.94	$_____
Cost Per Pound*** (500 lb. Weaned Wt.)	$ 0.75	$ 0.75	$ 0.75	$ 0.77	$_____

* Assume a weaning weight of 425 lbs.

** Includes seasonal grazing fees for calf at $9.00 per calf.

*** Cost adjusted for marketing costs at different weights.

BREAKEVEN ANALYSIS
TOTAL COSTS PER CALF INCLUDING PASTURE

Alternative Pasture Programs:	Marginal Land	Crop Land	Crown Land	P.F.R.A.	Your Costs
	- - - Cost Analysis 85% Calf Crop - - -				
Total Operating, Fixed & Pasture	$639.39	$687.62	$593.87	$609.98	$_____
Trucking, Selling*	10.11	10.11	10.11	19.11**	_____
TOTAL COSTS (425 lb. Weaned Wt.)	$649.50	$697.73	$603.98	$629.09	$_____
Cost Per Pound (425 lb. Weaned Wt.)	$ 1.53	$ 1.64	$ 1.42	$ 1.48	$_____
TOTAL COSTS (500 lb. Weaned Wt.)	$651.27	$699.50	$605.75	$630.86	$_____
Cost Per Pound**	$ 1.30	$ 1.40	$ 1.21	$ 1.26	$_____
	- - - Cost Analysis 95% Calf Crop - - -				
Total Operating, Fixed & Pasture	$572.08	$615.24	$530.30	$545.48	$_____
Trucking, Selling*	10.11	10.11	10.11	19.11**	_____
TOTAL COSTS (425 lb. Weaned Wt.)	$582.19	$625.35	$540.41	$564.59	$_____
Cost Per Pound (425 lb. Weaned Wt.)	$ 1.37	$ 1.47	$ 1.27	$ 1.33	$_____
TOTAL COSTS (500 lb. Weaned Wt.)	$583.96	$627.12	$542.18	$566.36	$_____
Cost Per Pound*** (500 lb. Weaned Wt.)	$ 1.17	$ 1.25	$ 1.08	$ 1.13	$_____

* Assume a weaning weight of 425 lbs.

** Includes seasonal grazing fees for calf at $9.00 per calf.

*** Cost adjusted for marketing costs at different weights.

OPERATING COSTS

1. Grain - 1.41 kg (3 lbs.) barley/cow/day for 60 days @ $0.097/kg. ($0.044/lb.)

2. Hay - 3 tonnes (3.3 tons) alfalfa brome hay/cow/winter @ $60/tonne. ($54/ton)

3. Salt - 16 kg (36 lbs.) salt/cow/year @ $0.20/kg. ($0.09/lb.)
   Minerals - 16 kg (36 lbs.) minerals/cow/year @ $0.42/kg. ($0.19/lb.)

4. Straw - 0.9 tonne (1 ton) straw/cow/year @ $22/tonne. ($20/ton)

5. Vet. & Medicine - $18.04/cow
   Drugs - $7.22/cow and $1.12/calf
   Blackleg (8 way vaccine) $0.28/calves only
   I.B.R. (cows every 3 years) $0.13/cow
   $0.38/calves only
   Sourguard 3 - $4.00/cow
   Footrot, louse control, degrubbing, surgery, antibiotics, etc. $3.00/cow
   Veterinarian Herd Health Services - $6.55/cow
   - $33.50/hour for 7 visits/year (assume 2 hrs. for 3 visits, 1 hr. for next 4)
   - Mileage $0.22/km round trip - budget assumes a distance of 80 km

6. Breeding Costs - Cow to bull ratio: 35 cows/bull. Three alternative breeding programs were considered. Budget calculated cost using own bull.

   a) Own Bull - Feed Costs - 3 tonnes (3.3 tons) alfalfa brome hay @ $60/tonne ($54/ton)
   - 3.6 kg (8 lbs.) grain/day for 120 days @ $0.097/kg. ($0.044/lb.)
   - Straw - 0.9 tonne (1 ton) @ $22/tonne ($20/ton)
   - Vet. & Medicine - $15/bull
   - Depreciation - Bull purchased at $2500, used for two breeding seasons and sold for $1500.
   - Investment Cost - Average cost of bull over two breeding seasons is $2000. Interest @ 8%.
   - Buildings & Pasture Costs - $0.26/day for 150 days.

   b) Artificial Insemination - may be another option $10 to $20/cow or heifer.

   c) P.F.R.A. Community Pasture - breeding fees of $28/cow or heifer.

7. Machinery Maintenance & Repairs - $1967.50/year or $28.11/cow.
   - Fuel - tractor used 1.5 hours/day for 150 days.
   - fuel consumer 10 L (2.2 gals.)/hour @ $0.43/L ($1.95/gal).
   - Oil, Repairs, & Maintenance - $450 over one winter.

Continued:

7. Machinery Maintenance & Repairs - Fuel, maintenance, oil and repairs for half ton truck (allocated) (winter and summer).
   - Fuel (assuming 4000 km/year (2500 miles/year) $250.
   - Maintenance, repairs, oils, etc., $300/year.

8. Hydro, Water & Telephone - $385/year, $5.50/cow.

9. Trucking, Selling Charges - (Culls) - Trucking $1.23/cwt. for 100 km (62 mi.) $123.75
   - Calculations based on selling 9 cull cows weighing 1100 lbs. valued at $500/cow, (9900 lbs. @ $45/cwt = $4,455)
   - Commission and selling charges at 1.5% of selling value, $67.50.

10. Death Loss - 2%/year death loss
    - cows valued at $600/head

11. Manure Removal - Budget assumed a custom charge of $1000. It was estimated that it would take two men with a crawler and one truck two days to clean the lots and pole barns.

12. Miscellaneous - Includes any miscellaneous farm cost associated with the Cow-Calf Enterprise.

13. Operating Interest - charged on half operating costs
    - 12% interest rate

14. Trucking, Selling Charges (Calves) - Same as in item 9 above.

Alternative (a) - Assume a market value of $320/calf for a 425 pound calf weaning weight.

Trucking - 4.25 x $1.25	=	$ 5.31
Selling - 0.015 x $320	=	4.80
		$10.11

Alternative (b) - Assume a market value of $375/calf for a 500 pound calf weaning weight.

Trucking - 5.00 x $1.25	=	$ 6.25
Selling - 0.015 x $375	=	5.63
		$11.88

PASTURE COSTS

Budget examined four different pasture programs because of varying land values and carrying capacities throughout the Province. Cattle were pastured 150 days.

A. Marginal Land - Land values at $375/hectare ($150/acre) with carrying capacity of 3.2 hectares (8 acres) per cow. Property taxes $1.00/hectare ($0.40/acre). 7.2 km (4.5 miles) of fence was required at a total estimated value of $976.50 (original cost). Budget assumed a rental fee of $20/hectare ($8/acre).

B. Crop Land - Land valued at $1750/hectare ($700/acre) with carrying capacity of 1.2 hectares (3 acres) per cow. Property taxes $10/hectare ($4/acre). Four km (2.5 miles) of fence were required at a total estimated value of $5425 (original cost). Budget assumed a rental fee of $87.50/hectare ($35/acre).

C. Crown Land - Crown land pasture cost is based on crown rental rate of $125/quarter which includes property tax. Carrying capacity is estimated at 11 cows per quarter. Eight km (5 miles) of fence was required at a total estimated value of $10850 (original cost).

D. P.F.R.A. - Community Pasture grazing fee is estimated at $0.26/day/cow plus $9/calf/season. Pasture cost includes fencing and supervision.

CAPITAL INVESTMENT

Fixed Costs:

Building investment and depreciation costs are based on the following estimated values developed from the Beef Cow Wintering Facilities (plan includes) with estimated life expectancy in brackets.

Bull Yard and Calving Pens (20 years)	$ 2,973
Main Wintering Lot & Pole Barn (20 years)	12,632
Well (20 years)	1,500
Handling Facilities (20 years)	2,852
Pasture Fencing (20 years)	1,356/km (2,170/mile)

Pasture fencing required in km or miles for:

Crop Land:	4.0 km	or	2.5 miles
Marginal Land:	7.2 km	or	4.5 miles
Crown Land:	8.0 km	or	5.0 miles

Machinery: Tractor and loader valued at $25,600 with life expectancy of 10 years - used 40% of the time in cow-calf enterprise. Assume a salvage value of 20%.

Miscellaneous equipment valued at $4,000 (post auger and driver, wagon and other miscellaneous tools along with a portion of half ton truck). Life expectancy of 12 years with salvage value of 20%.

Equipment:	Feed Bunks and Feeders (10 years)	$ 1,122
	Water System (10 years)	1,700
	TOTAL	$ 2,822

1. Depreciation:

Buildings & Improvements:

Pole Barn Wintering Lot: $\frac{\$12,632}{20 \text{ yrs.}} = \$631.60$

Bull Yard & Calving Pens: $\frac{\$ 2,973}{20 \text{ yrs.}} = \$147.65$

Handling Facilities: $\frac{\$ 2,852}{20 \text{ yrs.}} = \$142.60$

Well: $\frac{\$ 1,500}{20 \text{ yrs.}} = \$ 75.00$

TOTAL DEPRECIATION: $997.85 or $14.26/cow

Machinery and Equipment:

Water System & Feed Bunks: $\frac{\$ 2,822}{10 \text{ yrs.}} = \$ 282.20$

Tractor & Loader: $\frac{\$25,600 - 5,120}{10 \text{ yrs.}}$ @ 40% = $ 819.20

Miscellaneous Machinery: $\frac{\$4,000 - 800}{12 \text{ yrs.}} = \$ 266.67$

TOTAL DEPRECIATION $1,368.07 or $19.54/cow

Pasture Fencing (For Alternative Pasture Programs):

Crop Land: $\frac{\$ 5,425}{20 \text{ yrs.}} = \$271.15$ or $3.86/cow

Marginal Land: $\frac{\$ 9,765}{20 \text{ yrs.}} = \$488.25$ or $6.98/cow

Crown Land: $\frac{\$10,850}{20 \text{ yrs.}} = \$542.50$ or $7.75/cow

2. Investment Costs:

Buildings: (barn, lot, well, and bull yard)

$\frac{\$17,105}{2}$ @ 8% = $684.20 or $9.77/cow

Machinery & Equipment: (Including Handling Facilities)

Tractor $\frac{\$25,600 - \$5,120}{2}$ + 5,120 @ 8% 40% = $491.52

Miscellaneous $\frac{\$4,000 - 800}{2}$ + 800 @ 8% = $192.00

Water System & Feed Bunks $\frac{\$2,822}{2}$ @ 8% = $112.88

Handling Facilities $\frac{\$2,852}{2}$ @ 8% = $114.08

TOTAL MACHINERY & EQUIPMENT $910.48 or $13.00/cow

Pasture Fencing:

Crop Land $\frac{\$5,425}{2}$ @ 8% = $3.10/cow

Marginal Land $\frac{\$9,765}{2}$ @ 8% = $5.58/cow

Crown Land $\frac{\$10,850}{2}$ @ 8% = $6.20/cow

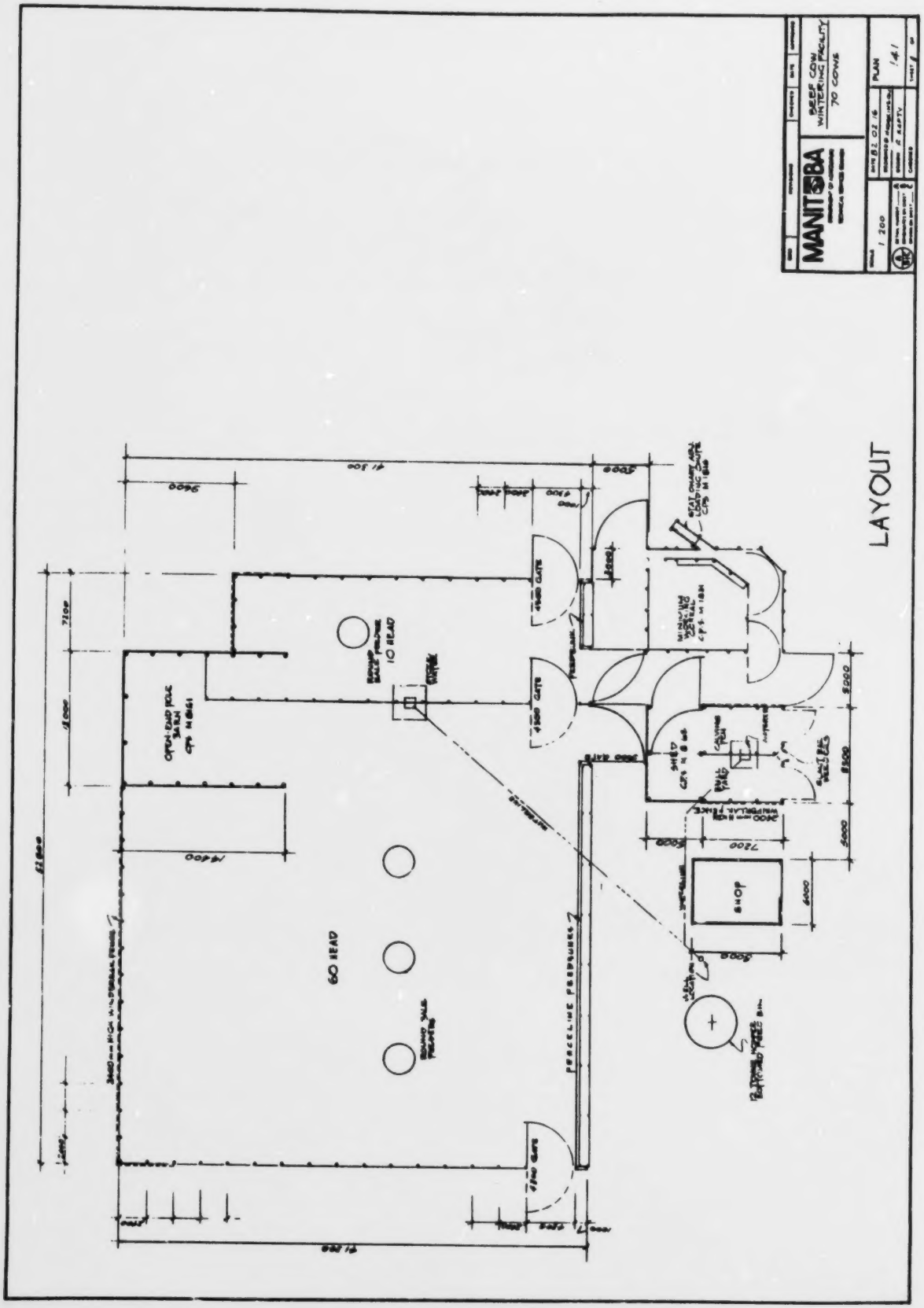
3. Livestock Investment Cost:

$600 per Cow @ 8% = $48.00/cow

4. Herd Replacement:

Assume replacement rate of 15%. Budget used net cost for replacement heifers based on selling value of cull cows at $500 and replacement heifers at $700.

$30.00/cow


MANITOBA
BEEF COW WINTERING FACILITY
70 COWS
LAYOUT
60 HEAD
10 HEAD
SHOP
SHED
PERCELINE FEEDRUNNERS

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